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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/782,815	02/14/2001	Rudolf Klingler	514413-3868	1724

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FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

HENDRICKS, KEITH D

ART UNIT	PAPER NUMBER
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1761

DATE MAILED: 03/19/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/782,815

Applicant(s)

KLINGLER ET AL.

Examiner

Keith Hendricks

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5 and 7. 6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

NOTE: *This application is an English translation of a foreign document. Applicants' representative is strongly encouraged to review the application, especially the claims, to comply with accepted U.S. Patent structure and language. The claims are generally narrative and indefinite, failing to conform with current U.S. practice, and are replete with grammatical and idiomatic errors. The rejections under 35 USC 112 2nd paragraph below are an attempt to call attention to these occurrences, yet may not be comprehensive.*

Claims 1 and 3 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are:

- The starting temperature of the starch is not provided, and no lower limit to the heating temperatures are provided. Thus, it is unclear as to what steps are to be performed in claim 3, and how this is to be done, if the heating temperature in claim 1, step (a), is for example 30°C. It is unclear whether an additional cooling step is required if the temperature is already within the range of claim 3 (0-35°C).
- Similarly, it is unclear as to what steps would be required, or would not be required, if the pH after acid heating is within the range of 5.5-7.5.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are:

- The phrase "in the presence of an acid", does not specifically set forth the necessary interaction of the acid and the starch within the same composition mixture. "In the presence of an acid" may indicate two separate containers, one containing an acid and one containing the starch.

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In claim 1, the phrase in part (b), "is then set to a pH...", is suggested to be amended to recite "is then neutralized to a pH...", in order to maintain a clear consistency with the dependent claims that refer to the composition being "neutralized."

In claims 7 and 12-13, the phrase "obtainable by" is indefinite. The assessment and summation of the potential availability or producibility of a modified starch product is not a reasonably measurable quality. It is subjective and is not constant. One skilled in the art has no means by which to assess whether a product is within the metes and bounds of the instant claims, described only by a process by which it may be obtained, yet also by some other undefined process(es). The phrase is suggested to be amended to recite "obtained by", thus clearly defining the claimed product as produced by the process described in the claim from which it depends.

The phrases "based on" and "features", in claims 8 and 9 respectively, do not clearly set forth the metes and bounds of the claimed invention. It is unclear as to what steps or modifications are utilized such that the claimed product may be "based on" one of the recited starches. If applicant wishes to indicate that one of these starches is the original starch utilized in the process claim 1, then this is not clear from the claim. Similarly, it is unclear as to what property is described or denoted by the phrase "features a granular structure". Contrast this to the phrase "comprises a granular structure."

Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite in that it fails to point out what is included or excluded by the claim language. This claim is an omnibus type claim. Initially, note that the claim (a) recites no method steps, (b) recites the use of a "genetically modified starch", which is misspelled *and* lacks a clear antecedent basis within any of the previous claims, and (c) recites "as claimed in claim 1 for producing thermochemically modified starch." Claim 1 is a process for producing thermochemically modified starch.

A broad range or limitation together with a narrow range or limitation that falls within the broad range or limitation (in the same claim) is considered indefinite, since the resulting claim does not clearly set forth the metes and bounds of the patent protection desired. Note the explanation given by the Board of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat. App. & Inter. 1989), as to where broad language is followed by "such as" and then narrow language. The Board stated that this can render a claim indefinite by raising a question or doubt as to whether the feature introduced by such language is (a) merely exemplary of the remainder of the claim, and therefore not required, or (b) a required feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131

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USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949). In the present instance, claims 11 and 14 recite the broad recitation of “foods”, and the claim also recites “food compositions or food intermediate products” which is the narrower statement of the range/limitation. Due to the undefined boundaries of the terms, the differences between “foods, food compositions or food intermediate products” is indistinguishable from the claims.

In claims 12-13, the phrase “one or more processes as claimed in claim 1”, is indefinite, as claim 1 provides for a single process.

Claim Rejections - 35 USC § 101 & 112

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 10-13 provide for the use of modified starch in producing other products, but, since the claims do not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 10-13 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd. v. Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

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Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

i) Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Hershenson et al. (US PAT 3,523,938, of record).

Hershenson et al. disclose a process for making “starch plasma expanders”. The process comprises subjecting a starch starting material such as waxy maize (corn) starch, preferably in granular form (col. 2, lines 18-21), to mild acid hydrolysis while heated. “The acid hydrolysis [and heating] conditions are effective for complete gelatinization” (col. 2, ln. 35-36), where “the gelatinization and hydrolysis can be one continuous processing step.” “The suspension is preferably at a low acid pH, such as a pH from 2.0 to 3.0”, where “a suitable temperature range is from 85 to 95°C” (col. 2, ln. 43-47). The rate of the procedure is performed “sufficiently slowly” such that the progress may be assayed, and the endpoint analytically determined. The mixture is also subjected to etherification under basic conditions. “Consequently, after the conclusion of the hydrolysis, the reaction mixture can be prepared for etherification by cooling and the addition of sodium hydroxide or other alkali” (col. 3, ln. 20-23). The reaction mixture is cooled to a temperature “ranging from 45 to 70°C” (col. 3). The extraction step described at column 4, provides for the production of a “neutralized syrup”, after the heating, hydrolysis and etherification steps are performed, “to bring the pH to 6.0” The syrup was then dried by spray-drying or drum drying.

Thus, the instantly-claimed process and resulting products are anticipated by Hershenson et al. Note the indefiniteness of claims 7-16, as provided under section 35 U.S.C. 112, second paragraph, above, where the referenced product reads upon the instantly-claimed products and methods of “use”.

ii) Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Klingler et al. (of record).

Klingler et al. describes the “acid modification of starch in a semi-dry process.” The authors of the German-language reference, Klingler and Busch, are also the inventors named in the instant

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application, and the reference describes the same invention therein. A granular starch substance is sprayed with acid and heated briefly. "The substance is then neutralized by spraying it with a soda solution and [is] simultaneously cooled" (abstract). In the example figure 1 flow chart, the heating reaction is performed at a temperature of less than 80°C for a time of less than 2 minutes. Figure 2 provides a chart denoting the change in viscosity over a period of reaction time of 0 to 40 minutes. Table 1 provides the reaction temperature range of 90-140°C, thus all meeting the instant claim limitations. Note the indefiniteness of claims 7-16, as provided under section 35 U.S.C. 112, second paragraph, above, where the referenced product reads upon the instantly-claimed products and methods of "use".

Double Patenting

Applicant is advised that should claim 10 be found allowable, claims 11-13 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). The claims do not set forth any additional process steps beyond the "use of" the thermochemically modified starch, such that they would be differentiated, one from another.

Applicant is advised that should claim 14 be found allowable, claims 15-16 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k). The claims do not set forth any additional elements beyond the thermochemically modified starch, such that they would be differentiated, one from another.

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Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Keith Hendricks whose telephone number is (703) 308-2959. The examiner can normally be reached on M-F (8:30am-6pm); First Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Milton Cano can be reached on (703) 308-3959. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9565 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



**KEITH HENDRICKS
PRIMARY EXAMINER**